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<110> Chen, Sei Yu
Macina, Roberto
Sun, Yongming
Recipon, Herve

<120> Compositions and Methods Relating to Lung Specific Genes

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<210> 15
<211> 1094

<212> DNA
<213> Homo sapiens

<400> 15
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tttgtaaatt tgattaacat acattgaatt ctgtgattaa cagtattggc aaataagttg 240
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ccacttctgt gctggatggg gcattttaat tgcagctata ctggagctag ttggaatcat 480
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<210> 16
<211> 1663
<212> DNA
<213> Homo sapiens

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acaaagttat caaagtcagg aaagacgaaa atcattgttc ccgtctcata aggtaggact 540
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ctttcaacag catggtagaa tatatgccat gtggtaatag tagtctttgt ttccatttaa 1620
gctttggcaa atctctttta gtactaatta gtttaaaaaa aaa 1663

<210> 17
<211> 598
<212> DNA
<213> Homo sapiens

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tcagagaact ctacttatag gctgtggttt ttcaagaaaa aggaaaagat tcataattca 420
ttgagctctt tccttgtgag aagaaaggcc actcttttgt gtgctgaagt tggacaacag 480
ttcccaagga agctgaattc tagctgaata ttgttattgg gttttgcact atgcccttta 540
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<210> 18
<211> 1134
<212> DNA
<213> Homo sapiens

<400> 18
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<210> 19
<211> 2092
<212> DNA
<213> Homo sapiens

<400> 19
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<210> 20
<211> 2371
<212> DNA
<213> Homo sapiens

<400> 20
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tatattacct ttgtaataaa acattataat c 2371

<210> 21
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

<400> 21
cttggtcttc ctgctcctga c 21

<210> 22
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

<400> 22
agggcagaga ggaacagca 19

<210> 23
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

<400> 23
ccagcgagga gcagcaggga tg 22

<210> 24
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

<400> 24
gcctgtttgg gagattagat ttt 23

<210> 25
<211> 23
<212> DNA
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<220>
<223> Description of Artificial Sequence: Synthetic

<400> 25
gcccaaacag aacagactaa aaa 23

<210> 26
<211> 38
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

<400> 26
aggttattag gttattatct ctctctcctg atttttcc 38

<210> 27
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

<400> 27
tggtggcgtt cctcctgtc 19

<210> 28
<211> 23
<212> DNA
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<220>
<223> Description of Artificial Sequence: Synthetic

<400> 28
cagagccctt cgtactggaa cac 23

<210> 29
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

<400> 29
tcgtacaggt cctgggtgct ccaca 25

<210> 30
<211> 20
<212> DNA
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<220>
<223> Description of Artificial Sequence: Synthetic

<400> 30
cttggcagct cacatggaac 20

<210> 31
<211> 22
<212> DNA
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<220>
<223> Description of Artificial Sequence: Synthetic

<400> 31
ctggggtgtc tctgtcactc tc 22

<210> 32
<211> 26
<212> DNA
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<220>
<223> Description of Artificial Sequence: Synthetic

<400> 32
ccatgaagtc ccacccctttt tctctg 26

<210> 33
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<212> DNA
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<220>
<223> Description of Artificial Sequence: Synthetic

<400> 33
tgcagcagaa aggggagag 19

<210> 34
<211> 18
<212> DNA
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<220>
<223> Description of Artificial Sequence: Synthetic

<400> 34
tccccattgc cctcaagt 18

<210> 35
<211> 22
<212> DNA
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<220>
<223> Description of Artificial Sequence: Synthetic

<400> 35
cgtgggcact cacctcggca ct 22

<210> 36
<211> 23
<212> DNA
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<220>
<223> Description of Artificial Sequence: Synthetic

<400> 36
caggctcatt ttattgtggt cat 23

<210> 37
<211> 23
<212> DNA
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<220>
<223> Description of Artificial Sequence: Synthetic

<400> 37
cccacactga tttaggcaca tag 23

<210> 38
<211> 30
<212> DNA
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<220>
<223> Description of Artificial Sequence: Synthetic

<400> 38
tttgaaggag ggcaggaaaa actatgtaag 30

<210> 39
<211> 21
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<220>
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<400> 39
agggagagga gctatggacg t 21

<210> 40
<211> 22
<212> DNA
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<220>
<223> Description of Artificial Sequence: Synthetic

<400> 40
ttttgaggca agactccatc tc 22

<210> 41
<211> 26
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<400> 41
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<210> 42
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<212> DNA
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<220>
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<400> 42
tggggacaat atggacctca 20

<210> 43
<211> 22
<212> DNA
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<220>
<223> Description of Artificial Sequence: Synthetic

<400> 43
ggcgagtgtc tatgatgaac ct 22

<210> 44
<211> 31
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

<400> 44
caggatctgt gaggatttca tttggataca t 31

<210> 45
<211> 17
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

<400> 45
ctccgtggct cgtgctt 17

<210> 46
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

<400> 46
cgctttcttt ttgccctctt gt 22

<210> 47
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

<400> 47
ccgaccttga gattattcct gt 22

<210> 48
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

<400> 48
gcaccactta aaccaaatcc a 21

<210> 49
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

<400> 49
tgctgccaac accacttctc catct 25

<210> 50
<211> 18
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<220>
<223> Description of Artificial Sequence: Synthetic

<400> 50
tgctgccaca aaccgaga 18

<210> 51
<211> 19
<212> DNA
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<220>
<223> Description of Artificial Sequence: Synthetic

<400> 51
ttgggagggt tggttggtt 19

<210> 52
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

<400> 52
ttttgagggc actagggaac gatctgt 27

<210> 53
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

<400> 53
cctgatacct ttaaccaatg ctct 24

<210> 54
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
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<400> 54
ttgggtagta tcaaatgggt aagg 24

<210> 55
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<212> DNA
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<400> 55
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<210> 56
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

<400> 56
ctcggatatg attaaagagt ttcg 24

<210> 57
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

<400> 57
tccactgtgc tgtttgttgt t 21

<210> 58
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

<400> 58
attggcgtgc tctttgtaac tctgaga 27

<210> 59
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

<400> 59
tggctaaaat aggtcttgta ggga 24

<210> 60
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

<400> 60
caaggagggg gcatttgta 19

<210> 61
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

<400> 61
tcctttcctt ggcaatctcc tctcctg 27

<210> 62
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

<400> 62
cctctgaaga aacgatcaca aca 23

<210> 63
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

<400> 63
attccagcct gagtcacaca ga 22

<210> 64
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

<400> 64
accaaggaga aacaaaacca agcagca 27

<210> 65
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

<400> 65
tgaggagaaa gaagggaatc ac 22

<210> 66
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

<400> 66
tcctaaggta gcactatttg gagac 25

<210> 67
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

<400> 67
agcaatgaag aatgaacttg gagtaaagag tca 33

<210> 68
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

<400> 68
atgggcaggt ctttctttcc 20

<210> 69
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

<400> 69
aggcagttct gttaccccac ta 22

<210> 70
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

<400> 70
tgtgctaagg acaggattgg ttgggta 27

<210> 71
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

<400> 71
actgcccacc acgctttata 20

<210> 72
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

<400> 72
tgagggtggg gagaggttac 20

<210> 73
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

<400> 73
agtcacatta ttagaggttc gcatctcagg 30

<210> 74
<211> 2722
<212> DNA
<213> Homo sapiens

<400> 74
gtttggatct tggttcattc tcaagcctca gacagtggtt caaagttttt ttcttccatt 60
tcaggtgtcg tgaaaagctt gaattcggcg cgccagatat cacacgtgcc aaggggctgg 120
ctcagcgaca gcggcgactg cggcggccgc gggagggcat cccgttgggg atccttccgc 180
acactgaaga gtacgtcttc gggtctaccc ctaatcacat aatggctgtg tttaatcaga 240
agtctgtctc ggatatgatt aaagagtttc gaaaaaattg gcgtgctctt tgtaactctg 300
agagaactac tctatgtggt gcagactcca tgctcttggc attgcagctt tctatggcgg 360
agaacaacaa acagcacagt ggagaattta cagtctctct cagtgatgtt ttattgacat 420
ggaaatactt gctccatgag aaattgaact taccagttga aaacatggac gtgactgacc 480
attatgagga cgttaggaag atttatgatg atttcttgaa gaacagtaat atgttagatc 540
tgattgatgt ttatcaaaaa tgtagggctt tgacttctaa ttgtgaaaat tataacacag 600
tatctcctag tcaactactg gattttctgt ctggcaaaca gtatgcagta ggtgatgaaa 660
ctgatctttc tataccaaca tcaccaacaa gtaaatacaa ccgtgataat gaaaaggtgc 720
agctgctagc aaggaaaatt atcttttcat atttaaatct gctagtgaat tcaaagaatg 780
acctggctgt ggcttatatt ctcaatattc ctgatagagg actaggaaga gaagccttca 840
ctgatttgaa acatgctgct cgagagaaac aaatgtctat ctttttggtg gccacgtctt 900
ttattagaac aatagagctt ggagggaaag gatatgcacc accaccatca gatcctttaa 960
ggacacatgt aaagggattg tctaatttta ttaatttcat tgacaaatta gatgagattc 1020
ttggagaaat accaaaccca agagggtgta aatccatctg ttggaagatc aacaattgga 1080
acgagttttg gaaatgttca tctggacaga agtaaaaatg aaaaagtatc aagaaaatca 1140
accagtcaga caggaaataa aagctcaaaa aggaaacagg tggatttgga tggtgaaaat 1200
attctctgtg ataatagaaa tgaaccacct caacataaaa atgctaaaat acctaagaaa 1260
tcaaatgatt cacagaatag attgtacggc aaactagcta aagtagcaaa aagtaataaa 1320
tgtactgcca aggacaagtt gatttctggc caggcaaagt taactcagtt ttttagacta 1380
taaatttgtg tcttatatgc tttaggttta tgtatctata aaccattcac caaagacatg 1440
cttaattttt aagagatcaa ggtgtaaatt atgatgattt attattttgg tctacagtgt 1500

atgtaaggtt agtatgttaa gcattgttta aaaatactag taagtcataa ttatgcagaa 1560
ttttcacaaa gtttaatgca cagagaaagc atatcatttc agttactgat acatcttaac 1620
actactttct tttaaaacag acatttaaca tacacaagtt atagtagcag tatgggcttc 1680
tcctcccatt ggcaattaaa tgcttttatt ttcttctgaa aagatgatgt ggaccaacag 1740
gtatcagact tgccaacaag gtcggtagac tcttcccagc atacatctga gcactgaagg 1800
aagaagaaag tttaaattgt ttaaaggact ataattatca cacaaaattt attaagaaaa 1860
aaagaatgga tctagtataa ctaattctga gtaaaccaaa atgataataa ttaattgttg 1920
ctatttaatc ccacattttt ggcaggtgta attgagccat ggtcttattt gattttgtta 1980
tgattgcatc caaattcact ttaactcaga gttctgttta atggtggtag gatgtaagaa 2040
ttgaatttga aaagactact cactgtcaaa atctctcctt cctataggaa atttagctga 2100
gttttcttca tccccaattt ctctcttttc ttgtgttgat tcagtattct gaactccatt 2160
ctcagctggg aaagctacag atccttttag tgcaagataa ggttttatag ccagattcag 2220
tggcagacca tgatttaaga aattatgttt ggagcctgtg ttctgtaaag agaaggttga 2280
tttggttttt agctatcgta ttcggagtgg aactataata caattgtata atattcttgt 2340
tgatcaattc aaagttactc tgcactgttt ttgacttttt aaaaatacct tagatgcaaa 2400
tttataggag aaaaaacact ttcagataag aggtgtttgc tgggatggaa gaactacctg 2460
gcatgtaaga aatatcgtca gtcgtcctaa tgcatattgt gactgtttgc atatacttct 2520
gtttataaaa gtatcagttt tacttttcag aggatttgta agaatcattt aaattttcat 2580
tgaaataaac gacaagtcac attgccaaaa aaaaaaaaaa aaaaaaaagt atttcattac 2640
ctctttctcc gcacctggcc tgcaggcggc cgcaggtaag ccagcccagg cctcgccctc 2700
cagctcaggc gggacaggag cg 2722

<210> 75
<211> 64
<212> PRT
<213> Homo sapiens

<400> 75
Val Leu Asn Ala Phe Leu Gln Pro Pro Gly Arg Gln Met Ile Ala Ile
1 5 10 15

Arg Lys Arg Gln Pro Glu Glu Thr Asn Asn Asp Tyr Glu Thr Ala Asp
20 25 30

Gly Gly Tyr Met Thr Leu Asn Pro Arg Ala Pro Thr Asp Asp Asp Lys
35 40 45

Asn Ile Tyr Leu Thr Leu Pro Pro Asn Asp His Val Asn Ser Asn Asn
50 55 60

<210> 76
<211> 261
<212> PRT

<213> Homo sapiens

<400> 76

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Met Ser Thr Thr Thr Cys Gln Val Val Ala Phe Leu Leu Ser Ile Leu
  1               5                  10                  15

Gly Leu Ala Gly Cys Ile Ala Ala Thr Gly Met Asp Met Trp Ser Thr
             20                  25                  30

Gln Asp Leu Tyr Asp Asn Pro Val Thr Ser Val Phe Gln Tyr Glu Gly
         35                  40                  45

Leu Trp Arg Ser Cys Val Arg Gln Ser Ser Gly Phe Thr Glu Cys Arg
     50                  55                  60

Pro Tyr Phe Thr Ile Leu Gly Leu Pro Ala Met Leu Gln Ala Val Arg
 65                  70                  75                  80

Ala Leu Met Ile Val Gly Ile Val Leu Gly Ala Ile Gly Leu Leu Val
                 85                  90                  95

Ser Ile Phe Ala Leu Lys Cys Ile Arg Ile Gly Ser Met Glu Asp Ser
            100                 105                 110

Ala Lys Ala Asn Met Thr Leu Thr Ser Gly Ile Met Phe Ile Val Ser
        115                 120                 125

Gly Leu Cys Ala Ile Ala Gly Val Ser Val Phe Ala Asn Met Leu Val
    130                 135                 140

Thr Asn Phe Trp Met Ser Thr Ala Asn Met Tyr Thr Gly Met Gly Gly
145                 150                 155                 160

Met Val Gln Thr Val Gln Thr Arg Tyr Thr Phe Gly Ala Ala Leu Phe
                165                 170                 175

Val Gly Trp Val Ala Gly Gly Leu Thr Leu Ile Gly Gly Val Met Met
            180                 185                 190

Cys Ile Ala Cys Arg Gly Leu Ala Pro Glu Glu Thr Asn Tyr Lys Ala
        195                 200                 205

Val Ser Tyr His Ala Ser Gly His Ser Val Ala Tyr Lys Pro Gly Gly
    210                 215                 220

Phe Lys Ala Ser Thr Gly Phe Gly Ser Asn Thr Lys Asn Lys Lys Ile
225                 230                 235                 240
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Tyr Asp Gly Gly Ala Arg Thr Glu Asp Glu Val Gln Ser Tyr Pro Ser
245 250 255

Lys His Asp Tyr Val
260

<210> 77
<211> 1461
<212> PRT
<213> Homo sapiens

<400> 77
Met Glu Ala Arg Ser Arg Ser Ala Glu Glu Leu Arg Arg Ala Glu Leu
1 5 10 15

Val Glu Ile Ile Val Glu Thr Glu Ala Gln Thr Gly Val Ser Gly Ile
20 25 30

Asn Val Ala Gly Gly Gly Lys Glu Gly Ile Phe Val Arg Glu Leu Arg
35 40 45

Glu Asp Ser Pro Ala Ala Arg Ser Leu Ser Leu Gln Glu Gly Asp Gln
50 55 60

Leu Leu Ser Ala Arg Val Phe Phe Glu Asn Phe Lys Tyr Glu Asp Ala
65 70 75 80

Leu Arg Leu Leu Gln Cys Ala Glu Pro Tyr Lys Val Ser Phe Cys Leu
85 90 95

Lys Arg Thr Val Pro Thr Gly Asp Leu Ala Leu Arg Pro Gly Thr Val
100 105 110

Ser Gly Tyr Glu Ile Lys Gly Pro Arg Ala Lys Val Ala Lys Leu Asn
115 120 125

Ile Gln Ser Leu Ser Pro Val Lys Lys Lys Lys Met Val Pro Gly Ala
130 135 140

Leu Gly Val Pro Ala Asp Leu Ala Pro Val Asp Val Glu Phe Ser Phe
145 150 155 160

Pro Lys Phe Ser Arg Leu Arg Arg Gly Leu Lys Ala Glu Ala Val Lys
165 170 175

Gly Pro Val Pro Ala Ala Pro Ala Arg Arg Arg Leu Gln Leu Pro Arg
180 185 190

Leu Arg Val Arg Glu Val Ala Glu Glu Ala Gln Ala Ala Arg Leu Ala
195 200 205

Ala Ala Ala Pro Pro Pro Arg Lys Ala Lys Val Glu Ala Glu Val Ala
210 215 220

Ala Gly Ala Arg Phe Thr Ala Pro Gln Val Glu Leu Val Gly Pro Arg
225 230 235 240

Leu Pro Gly Ala Glu Val Gly Val Pro Gln Val Ser Ala Pro Lys Ala
245 250 255

Ala Pro Ser Ala Glu Ala Ala Gly Gly Phe Ala Leu His Leu Pro Thr
260 265 270

Leu Gly Leu Gly Ala Pro Ala Pro Pro Ala Val Glu Ala Pro Ala Val
275 280 285

Gly Ile Gln Val Pro Gln Val Glu Leu Pro Ala Leu Pro Ser Leu Pro
290 295 300

Thr Leu Pro Thr Leu Pro Cys Leu Glu Thr Arg Glu Gly Ala Val Ser
305 310 315 320

Val Val Val Pro Thr Leu Asp Val Ala Ala Pro Thr Val Gly Val Asp
325 330 335

Leu Ala Leu Pro Gly Ala Glu Val Glu Ala Arg Gly Glu Ala Pro Glu
340 345 350

Val Ala Leu Lys Met Pro Arg Leu Ser Phe Pro Arg Phe Gly Ala Arg
355 360 365

Ala Lys Glu Val Ala Glu Ala Lys Val Ala Lys Val Ser Pro Glu Ala
370 375 380

Arg Val Lys Gly Pro Arg Leu Arg Met Pro Thr Phe Gly Leu Ser Leu
385 390 395 400

Leu Glu Pro Arg Pro Ala Ala Pro Glu Val Val Glu Ser Lys Leu Lys
405 410 415

Leu Pro Thr Ile Lys Met Pro Ser Leu Gly Ile Gly Val Ser Gly Pro
420 425 430

Glu Val Lys Val Pro Lys Gly Pro Glu Val Lys Leu Pro Lys Ala Pro
435 440 445

Glu Val Lys Leu Pro Lys Val Pro Glu Ala Ala Leu Pro Glu Val Arg
450 455 460

Leu Pro Glu Val Glu Leu Pro Lys Val Ser Glu Met Lys Leu Pro Lys
465 470 475 480

Val Pro Glu Met Ala Val Pro Glu Val Arg Leu Pro Glu Val Glu Leu
485 490 495

Pro Lys Val Ser Glu Met Lys Leu Pro Lys Val Pro Glu Met Ala Val
500 505 510

Pro Glu Val Arg Leu Pro Glu Val Gln Leu Leu Lys Val Ser Glu Met
515 520 525

Lys Leu Pro Lys Val Pro Glu Met Ala Val Pro Glu Val Arg Leu Pro
530 535 540

Glu Val Gln Leu Pro Lys Val Ser Glu Met Lys Leu Pro Glu Val Ser
545 550 555 560

Glu Val Ala Val Pro Glu Val Arg Leu Pro Glu Val Gln Leu Pro Lys
565 570 575

Val Pro Glu Met Lys Val Pro Glu Met Lys Leu Pro Lys Val Pro Glu
580 585 590

Met Lys Leu Pro Glu Met Lys Leu Pro Glu Val Gln Leu Pro Lys Val
595 600 605

Pro Glu Met Ala Val Pro Asp Val His Leu Pro Glu Val Gln Leu Pro
610 615 620

Lys Val Pro Glu Met Lys Leu Pro Glu Met Lys Leu Pro Glu Val Lys
625 630 635 640

Leu Pro Lys Val Pro Glu Met Ala Val Pro Asp Val His Leu Pro Glu
645 650 655

Val Gln Leu Pro Lys Val Pro Glu Met Lys Leu Pro Lys Met Pro Glu
660 665 670

Met Ala Val Pro Glu Val Arg Leu Pro Glu Val Gln Leu Pro Lys Val
675 680 685

Ser Glu Met Lys Leu Pro Lys Val Pro Glu Met Ala Val Pro Asp Val
690 695 700

His Leu Pro Glu Val Gln Leu Pro Lys Val Cys Glu Met Lys Val Pro
705 710 715 720

Asp Met Lys Leu Pro Glu Ile Lys Leu Pro Lys Val Pro Glu Met Ala
725 730 735

Val Pro Asp Val His Leu Pro Glu Val Gln Leu Pro Lys Val Ser Glu
740 745 750

Ile Arg Leu Pro Glu Met Gln Val Pro Lys Val Pro Asp Val His Leu
755 760 765

Pro Lys Ala Pro Glu Val Lys Leu Pro Arg Ala Pro Glu Val Gln Leu
770 775 780

Lys Ala Thr Lys Ala Glu Gln Ala Glu Gly Met Glu Phe Gly Phe Lys
785 790 795 800

Met Pro Lys Met Thr Met Pro Lys Leu Gly Arg Ala Glu Ser Pro Ser
805 810 815

Arg Gly Lys Pro Gly Glu Ala Gly Ala Glu Val Ser Gly Lys Leu Val
820 825 830

Thr Leu Pro Cys Leu Gln Pro Glu Val Asp Gly Glu Ala His Val Gly
835 840 845

Val Pro Ser Leu Thr Leu Pro Ser Val Glu Leu Asp Leu Pro Gly Ala
850 855 860

Leu Gly Leu Gln Gly Gln Val Pro Ala Ala Lys Met Gly Lys Gly Glu
865 870 875 880

Arg Ala Glu Gly Pro Glu Val Ala Ala Gly Val Arg Glu Val Gly Phe
885 890 895

Arg Val Pro Ser Val Glu Ile Val Thr Pro Gln Leu Pro Ala Val Glu
900 905 910

Ile Glu Glu Gly Arg Leu Glu Met Ile Glu Thr Lys Val Lys Pro Ser
915 920 925

Ser Lys Phe Ser Leu Pro Lys Phe Gly Leu Ser Gly Pro Lys Val Ala
930 935 940

Lys Ala Glu Ala Glu Gly Ala Gly Arg Ala Thr Lys Leu Lys Val Ser
945 950 955 960

Lys Phe Ala Ile Ser Leu Pro Lys Ala Arg Val Gly Ala Glu Ala Glu
965 970 975

Ala Lys Gly Ala Gly Glu Ala Gly Leu Leu Pro Ala Leu Asp Leu Ser
980 985 990

Ile Pro Gln Leu Ser Leu Asp Ala His Leu Pro Ser Gly Lys Val Glu
995 1000 1005

Val Ala Gly Ala Asp Leu Lys Phe Lys Gly Pro Arg Phe Ala Leu Pro
1010 1015 1020

Lys Phe Gly Val Arg Gly Arg Asp Thr Glu Ala Ala Glu Leu Val Pro
1025 1030 1035 1040

Gly Val Ala Glu Leu Glu Gly Lys Gly Trp Gly Trp Asp Gly Arg Val
1045 1050 1055

Lys Met Pro Lys Leu Lys Met Pro Ser Phe Gly Leu Ala Arg Gly Lys
1060 1065 1070

Glu Ala Glu Val Gln Gly Asp Arg Ala Ser Pro Gly Glu Lys Ala Glu
1075 1080 1085

Ser Thr Ala Val Gln Leu Lys Ile Pro Glu Val Glu Leu Val Thr Leu
1090 1095 1100

Gly Ala Gln Glu Glu Gly Arg Ala Glu Gly Ala Val Ala Val Ser Gly
1105 1110 1115 1120

Met Gln Leu Ser Gly Leu Lys Val Ser Thr Ala Arg Gln Val Val Thr
1125 1130 1135

Glu Gly His Asp Ala Gly Leu Arg Met Pro Pro Leu Gly Ile Ser Leu
1140 1145 1150

Pro Gln Val Glu Leu Thr Gly Phe Gly Glu Ala Gly Thr Pro Gly Gln
1155 1160 1165

Gln Ala Gln Ser Thr Val Pro Ser Ala Glu Gly Thr Ala Gly Tyr Arg
1170 1175 1180

Val Gln Val Pro Gln Val Thr Leu Ser Leu Pro Gly Ala Gln Val Ala
1185 1190 1195 1200

Gly Gly Glu Leu Leu Val Gly Glu Gly Val Phe Lys Met Pro Thr Val
1205 1210 1215

Thr Val Pro Gln Leu Glu Leu Asp Val Gly Leu Ser Arg Glu Ala Gln
1220 1225 1230

Ala Gly Glu Ala Ala Thr Gly Glu Gly Gly Leu Arg Leu Lys Leu Pro
1235 1240 1245

Thr Leu Gly Ala Arg Ala Arg Val Gly Gly Glu Gly Ala Glu Glu Gln
1250 1255 1260

Pro Pro Gly Ala Glu Arg Thr Phe Cys Leu Ser Leu Pro Asp Val Glu
1265 1270 1275 1280

Leu Ser Pro Ser Gly Gly Asn His Ala Glu Tyr Gln Val Ala Glu Gly
1285 1290 1295

Glu Gly Glu Ala Gly His Lys Leu Lys Val Arg Leu Pro Arg Phe Gly
1300 1305 1310

Leu Val Arg Ala Lys Glu Gly Ala Glu Glu Gly Glu Lys Ala Lys Ser
1315 1320 1325

Pro Lys Leu Arg Leu Pro Arg Val Gly Phe Ser Gln Ser Glu Met Val
1330 1335 1340

Thr Gly Glu Gly Ser Pro Ser Pro Glu Glu Glu Glu Glu Glu Glu Glu
1345 1350 1355 1360

Glu Gly Ser Gly Glu Gly Ala Ser Gly Arg Arg Gly Arg Val Arg Val
1365 1370 1375

Arg Leu Pro Arg Val Gly Leu Ala Ala Pro Ser Lys Ala Ser Arg Gly
1380 1385 1390

Gln Glu Gly Asp Ala Ala Pro Lys Ser Pro Val Arg Glu Lys Ser Pro
1395 1400 1405

Lys Phe Arg Phe Pro Arg Val Ser Leu Ser Pro Lys Ala Arg Ser Gly
1410 1415 1420

Ser Gly Asp Gln Glu Glu Gly Gly Leu Arg Val Arg Leu Pro Ser Val
1425 1430 1435 1440

Gly Phe Ser Glu Thr Gly Ala Pro Gly Pro Ala Arg Met Glu Gly Ala
1445 1450 1455

Gln Ala Ala Ala Val
1460

<210> 78
<211> 879
<212> PRT
<213> Homo sapiens

<400> 78

Arg Glu Leu Trp Thr Phe Ala Gly Ser Arg Asp Pro Ser Ala Pro Arg
1   5   10   15

Leu Ala Tyr Gly Tyr Gly Pro Gly Ser Leu Arg Glu Leu Arg Ala Arg
            20   25   30

Glu Phe Ser Arg Leu Ala Gly Thr Val Tyr Leu Asp His Ala Gly Ala
        35   40   45

Thr Leu Phe Ser Gln Ser Gln Leu Glu Ser Phe Thr Ser Asp Leu Met
    50   55   60

Glu Asn Thr Tyr Gly Asn Pro His Ser Gln Asn Ile Ser Ser Lys Leu
65   70   75   80

Thr His Asp Thr Val Glu Gln Val Arg Tyr Arg Ile Leu Ala His Phe
                85   90   95

His Thr Thr Ala Glu Asp Tyr Thr Val Ile Phe Thr Ala Gly Ser Thr
            100   105   110

Ala Ala Leu Lys Leu Val Ala Glu Ala Phe Pro Trp Val Ser Gln Gly
        115   120   125

Pro Glu Ser Ser Gly Ser Arg Phe Cys Tyr Leu Thr Asp Ser His Thr
    130   135   140

Ser Val Val Gly Met Arg Asn Val Thr Met Ala Ile Asn Val Ile Ser
145   150   155   160

Ile Pro Val Arg Pro Glu Asp Leu Trp Ser Ala Glu Glu Arg Gly Ala
                165   170   175

Ser Ala Ser Asn Pro Asp Cys Gln Leu Pro His Leu Phe Cys Tyr Pro
            180   185   190

Ala Gln Ser Asn Phe Ser Gly Val Arg Tyr Pro Leu Ser Trp Ile Glu
        195   200   205

Glu Val Lys Ser Gly Arg Leu Arg Pro Val Ser Thr Pro Gly Lys Trp

210 215 220

Phe Val Leu Leu Asp Ala Ala Ser Tyr Val Ser Thr Ser Pro Leu Asp
225 230 235 240

Leu Ser Ala His Gln Ala Asp Phe Val Pro Ile Ser Phe Tyr Lys Ile
245 250 255

Phe Gly Phe Arg Thr Gly Leu Gly Ala Leu Trp Val His Asn Arg Ala
260 265 270

Ala Pro Leu Leu Arg Lys Thr Tyr Phe Gly Gly Gly Thr Ala Ser Ala
275 280 285

Tyr Leu Ala Gly Glu Asp Phe Tyr Ile Pro Arg Gln Ser Val Ala Gln
290 295 300

Arg Phe Glu Asp Gly Thr Ile Ser Phe Leu Asp Val Ile Ala Leu Lys
305 310 315 320

His Gly Phe Asp Thr Leu Glu Arg Leu Thr Gly Gly Met Glu Asn Ile
325 330 335

Lys Gln His Thr Phe Thr Leu Ala Gln Tyr Thr Tyr Met Ala Leu Ser
340 345 350

Ser Leu Gln Tyr Pro Asn Gly Ala Pro Val Val Arg Ile Tyr Ser Asp
355 360 365

Ser Glu Phe Ser Ser Pro Glu Val Gln Gly Pro Ile Ile Asn Phe Asn
370 375 380

Val Leu Asp Asp Lys Gly Asn Ile Ile Gly Tyr Ser Gln Val Asp Lys
385 390 395 400

Met Ala Ser Leu Tyr Asn Ile His Leu Arg Thr Gly Cys Phe Cys Asn
405 410 415

Thr Gly Ala Cys Gln Arg His Leu Gly Ile Ser Asn Glu Met Val Arg
420 425 430

Lys His Phe Gln Ala Gly His Val Cys Gly Asp Asn Met Asp Leu Ile
435 440 445

Asp Gly Gln Pro Thr Gly Ser Val Arg Ile Ser Phe Gly Tyr Met Ser
450 455 460

Thr Leu Asp Asp Val Gln Ala Phe Leu Arg Phe Ile Ile Asp Thr Arg

465   470   475   480

Leu His Ser Ser Gly Asp Trp Pro Val Pro Gln Ala His Ala Asp Thr
                485   490   495

Gly Glu Thr Gly Ala Pro Ser Ala Asp Ser Gln Ala Asp Val Ile Pro
            500   505   510

Ala Val Met Gly Arg Arg Ser Leu Ser Pro Gln Glu Asp Ala Leu Thr
        515   520   525

Gly Ser Arg Val Trp Asn Asn Ser Ser Thr Val Asn Ala Val Pro Val
    530   535   540

Ala Pro Pro Val Cys Asp Val Ala Arg Thr Gln Pro Thr Pro Ser Glu
545   550   555   560

Lys Ala Ala Gly Val Leu Glu Gly Ala Leu Gly Pro His Val Val Thr
                565   570   575

Asn Leu Tyr Leu Tyr Pro Ile Lys Ser Cys Ala Ala Phe Glu Val Thr
            580   585   590

Arg Trp Pro Val Gly Asn Gln Gly Leu Leu Tyr Asp Arg Ser Trp Met
        595   600   605

Val Val Asn His Asn Gly Val Cys Leu Ser Gln Lys Gln Glu Pro Arg
    610   615   620

Leu Cys Leu Ile Gln Pro Phe Ile Asp Leu Arg Gln Arg Ile Met Val
625   630   635   640

Ile Lys Ala Lys Gly Met Glu Pro Ile Glu Val Pro Leu Glu Glu Asn
                645   650   655

Ser Glu Arg Thr Gln Ile Arg Gln Ser Arg Val Cys Ala Asp Arg Val
            660   665   670

Ser Thr Tyr Asp Cys Gly Glu Lys Ile Ser Ser Trp Leu Ser Thr Phe
        675   680   685

Phe Gly Arg Pro Cys His Leu Ile Lys Gln Ser Ser Asn Ser Gln Arg
    690   695   700

Asn Ala Lys Lys Lys His Gly Lys Asp Gln Leu Pro Gly Thr Met Ala
705   710   715   720

Thr Leu Ser Leu Val Asn Glu Ala Gln Tyr Leu Leu Ile Asn Thr Ser

725 730 735

Ser Ile Leu Glu Leu His Arg Gln Leu Asn Thr Ser Asp Glu Asn Gly
740 745 750

Lys Glu Glu Leu Phe Ser Leu Lys Asp Leu Ser Leu Arg Phe Arg Ala
755 760 765

Asn Ile Ile Ile Asn Gly Lys Arg Ala Phe Glu Glu Glu Lys Trp Asp
770 775 780

Glu Ile Ser Ile Gly Ser Leu Arg Phe Gln Val Leu Gly Pro Cys His
785 790 795 800

Arg Cys Gln Met Ile Cys Ile Asp Gln Gln Thr Gly Gln Arg Asn Gln
805 810 815

His Val Phe Gln Lys Leu Ser Glu Ser Arg Glu Thr Lys Val Asn Phe
820 825 830

Gly Met Tyr Leu Met His Ala Ser Leu Asp Leu Ser Ser Pro Cys Phe
835 840 845

Leu Ser Val Gly Ser Gln Val Leu Pro Val Leu Lys Glu Asn Val Glu
850 855 860

Gly His Asp Leu Pro Ala Ser Glu Lys His Gln Asp Val Thr Ser
865 870 875

<210> 79
<211> 107
<212> PRT
<213> Homo sapiens

<400> 79
Ser Phe Phe Phe Phe Leu Arg Ala Ser Leu Thr Leu Ser Pro Arg Leu
1 5 10 15

Glu Cys Ser Gly Thr Ile Ala Ala His Cys Asn Pro His Leu Pro Gly
20 25 30

Ser Ser Asn Tyr Ala Ala Ser Ala Ser Gln Glu Ala Gly Thr Ser Gly
35 40 45

Met Ser His His Thr Trp Ile Ile Phe Cys Ile Phe Leu Val Glu Thr
50 55 60

Gly Phe His His Val Gly Gln Ala Gly Leu Glu Leu Leu Ser Ser Ser
65 70 75 80

Asp Ser Pro Pro Thr Leu Ala Ser Gln Ser Ala Gly Ile Thr Gly Met
85 90 95

Ser His His Ala Gln Pro Ala Thr Leu Ser Phe
100 105

<210> 80
<211> 93
<212> PRT
<213> Homo sapiens

<400> 80
Gln Asp Arg Ile Ile Asn Leu Val Val Gly Ser Leu Thr Ser Leu Leu
1 5 10 15

Ile Leu Val Thr Leu Ile Ser Ala Phe Val Phe Pro Gln Leu Pro Pro
20 25 30

Lys Pro Leu Asn Ile Phe Phe Ala Val Cys Ile Ser Leu Ser Ser Ile
35 40 45

Thr Ala Cys Ile Leu Ile Tyr Trp Tyr Arg Gln Gly Asp Leu Glu Pro
50 55 60

Lys Phe Arg Lys Leu Ile Tyr Tyr Ile Ile Phe Ser Ile Ile Met Leu
65 70 75 80

Cys Ile Cys Ala Asn Leu Tyr Phe His Asp Val Gly Arg
85 90

<210> 81
<211> 498
<212> PRT
<213> Homo sapiens

<400> 81
Met Asp Val Thr Asp His Tyr Glu Asp Val Arg Lys Ile Tyr Asp Asp
1 5 10 15

Phe Leu Lys Asn Ser Asn Met Leu Asp Leu Ile Asp Val Tyr Gln Lys
20 25 30

Cys Arg Ala Leu Thr Ser Asn Cys Glu Asn Tyr Asn Thr Val Ser Pro

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          35                  40                  45

Ser Gln Leu Leu Asp Phe Leu Ser Gly Lys Gln Tyr Ala Val Gly Asp
     50                  55                  60

Glu Thr Asp Leu Ser Ile Pro Thr Ser Pro Thr Ser Lys Tyr Asn Arg
 65                  70                  75                  80

Asp Asn Glu Lys Val Gln Leu Leu Ala Arg Lys Ile Ile Phe Ser Tyr
                 85                  90                  95

Leu Asn Leu Leu Val Asn Ser Lys Asn Asp Leu Ala Val Ala Tyr Ile
            100                 105                 110

Leu Asn Ile Pro Asp Arg Gly Leu Gly Arg Glu Ala Phe Thr Asp Leu
        115                 120                 125

Lys His Ala Ala Arg Glu Lys Gln Met Ser Ile Phe Leu Val Ala Thr
    130                 135                 140

Ser Phe Ile Arg Thr Ile Glu Leu Gly Gly Lys Gly Tyr Ala Pro Pro
145                 150                 155                 160

Pro Ser Asp Pro Leu Arg Thr His Val Lys Gly Leu Ser Asn Phe Ile
                165                 170                 175

Asn Phe Ile Asp Lys Leu Asp Glu Ile Leu Gly Glu Ile Pro Asn Pro
            180                 185                 190

Ser Ile Ala Gly Gly Gln Ile Leu Ser Val Ile Lys Met Gln Leu Ile
        195                 200                 205

Lys Gly Gln Asn Ser Arg Asp Pro Phe Cys Lys Ala Ile Glu Glu Val
    210                 215                 220

Ala Gln Asp Leu Asp Leu Arg Ile Lys Asn Ile Ile Asn Ser Gln Glu
225                 230                 235                 240

Gly Val Val Ala Leu Ser Thr Thr Asp Ile Ser Pro Ala Arg Pro Lys
                245                 250                 255

Ser His Ala Ile Asn His Gly Thr Ala Tyr Cys Gly Arg Asp Thr Val
            260                 265                 270

Lys Ala Leu Leu Val Leu Leu Asp Glu Glu Ala Ala Asn Ala Pro Thr
        275                 280                 285

Lys Asn Lys Ala Glu Leu Leu Tyr Asp Glu Glu Asn Thr Ile His His
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290 295 300

His Gly Thr Ser Ile Leu Thr Leu Phe Arg Ser Pro Thr Gln Val Asn
305 310 315 320

Asn Ser Ile Lys Pro Leu Arg Glu Arg Ile Cys Val Ser Met Gln Glu
325 330 335

Lys Lys Ile Lys Met Lys Gln Thr Leu Ile Arg Ser Gln Phe Ala Cys
340 345 350

Thr Tyr Lys Asp Asp Tyr Met Ile Ser Lys Asp Asn Trp Asn Asn Val
355 360 365

Asn Leu Ala Ser Lys Pro Leu Cys Val Leu Tyr Met Glu Asn Asp Leu
370 375 380

Ser Glu Gly Val Asn Pro Ser Val Gly Arg Ser Thr Ile Gly Thr Ser
385 390 395 400

Phe Gly Asn Val His Leu Asp Arg Ser Lys Asn Glu Lys Val Ser Arg
405 410 415

Lys Ser Thr Ser Gln Thr Gly Asn Lys Ser Ser Lys Arg Lys Gln Val
420 425 430

Asp Leu Asp Gly Glu Asn Ile Leu Cys Asp Asn Arg Asn Glu Pro Pro
435 440 445

Gln His Lys Asn Ala Lys Ile Pro Lys Lys Ser Asn Asp Ser Gln Asn
450 455 460

Arg Leu Tyr Gly Lys Leu Ala Lys Val Ala Lys Ser Asn Lys Cys Thr
465 470 475 480

Ala Lys Asp Lys Leu Ile Ser Gly Gln Ala Lys Leu Thr Gln Phe Phe
485 490 495

Arg Leu

<210> 82
<211> 104
<212> PRT
<213> Homo sapiens

<400> 82

Phe Tyr Lys Arg Glu Leu Leu Phe Phe Cys Cys Cys Phe Phe Ala Asp
1 5 10 15

Ser Thr Ile Ser Ala His Cys Gly Leu His Leu Met Asp Ala Arg Asp
20 25 30

Pro Pro Thr Ser Ala Ser Gln Ala Gly Thr Thr Val Val Asn His His
35 40 45

Ala Cys Leu Leu Phe Lys Phe Cys Val Glu Met Arg Ser His Cys Ile
50 55 60

Ala Ala Ala Gly Leu Glu Leu Leu Val Ser Ser Asn Pro Pro Ser Ser
65 70 75 80

Val Phe Gln Ser Ala Gly Ile Thr Gly Val Ser His Cys Ala Leu Pro
85 90 95

Asn Met Gly Ser Phe Arg His Ala
100

<210> 83
<211> 216
<212> PRT
<213> Homo sapiens

<400> 83
Ser Glu Glu Thr Ile Thr Thr Thr Ile Gln Asp Leu Phe Pro Lys Val
1 5 10 15

Met Lys Lys Met Arg Val Pro Ile Thr Leu Gly Cys Cys Leu Val Leu
20 25 30

Phe Leu Leu Gly Leu Val Cys Val Thr Gln Ala Gly Ile Tyr Trp Val
35 40 45

His Leu Ile Asp His Phe Cys Ala Gly Trp Gly Ile Leu Ile Ala Ala
50 55 60

Ile Leu Glu Leu Val Gly Ile Ile Trp Ile Tyr Gly Gly Asn Arg Phe
65 70 75 80

Ile Glu Asp Thr Glu Met Met Ile Gly Ala Lys Arg Trp Ile Phe Trp
85 90 95

Leu Trp Trp Arg Ala Cys Trp Phe Val Ile Thr Pro Ile Leu Leu Ile
100 105 110

Ala Ile Phe Ile Trp Ser Leu Val Gln Phe His Arg Pro Asn Tyr Gly
115 120 125

Ala Ile Pro Tyr Pro Asp Trp Gly Val Ala Leu Gly Trp Cys Met Ile
130 135 140

Val Phe Cys Ile Ile Trp Ile Pro Ile Met Ala Ile Ile Lys Ile Ile
145 150 155 160

Gln Ala Lys Gly Asn Ile Phe Gln Arg Leu Ile Ser Cys Cys Arg Pro
165 170 175

Ala Ser Asn Trp Gly Pro Tyr Leu Glu Gln His Arg Gly Glu Arg Tyr
180 185 190

Lys Asp Met Val Val Pro Lys Lys Glu Ala Gly His Glu Ile Pro Thr
195 200 205

Val Ser Gly Ser Arg Lys Pro Glu
210 215

<210> 84
<211> 79
<212> PRT
<213> Homo sapiens

<400> 84
Gly Gly Leu Phe Val Ala Gly Ile Asn Leu Thr Glu Asn Leu Gln Tyr
1 5 10 15

Val Leu Ala His Pro Ser Glu Ser Leu Glu Lys Met Thr Leu Pro Asn
20 25 30

Leu Pro Arg Leu Ser Ala Trp Val Arg Glu Gln Cys Pro Gly Pro Gly
35 40 45

Ser Arg Cys Thr Asn Ile Ile Ala Gly Asp Phe Ile Gly Ala Asp Gly
50 55 60

Phe Val Ser Asp Val Ile Ala Leu Asn Gln Lys Leu Leu Trp Cys
65 70 75